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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/813,942 | 03/30/2004 | Vladimir Pentkovksi | P18224 | 5784 |

59796 7590 11/14/2007

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| EXAMINER | |
|---|---|
| BATAILLE, PIERRE MICHE | |
| **ART UNIT** | **PAPER NUMBER** |
| 2186 | |

| MAIL DATE | DELIVERY MODE |
|---|---|
| 11/14/2007 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/813,942 | PENTKOVKSI ET AL. | |
| | Examiner | Art Unit | |
| | Pierre-Michel Bataille | 2186 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *24 September 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-38* is/are pending in the application.

4a) Of the above claim(s) *1-7,9,14,19,21,22,24 and 25* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *8,10,11,18,20,23 and 26-38* is/are rejected.

7)☒ Claim(s) *12-13 15-17* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

### *Response to Amendment*

1. The present Office Action is taken in response to Applicant's communication filed 24 September 2007. Applicant's amendments and/or arguments have been considered with the results that follow.

2. Claims 8, 10-13, 15-18, 20, 23, and 26-38 are pending in the application under prosecution.

### *Response to Arguments*

3. Applicant's arguments with respect to claims 8, 10-13, 15-18, 20, 23, and 26-38 have been considered but are moot in view of the new ground(s) of rejection.

### *Claim Rejections - 35 USC § 112*

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 26 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 26 is of improper dependent upon canceled claim 25. It is assumed that claim 26 is dependent upon claim 23, which provides proper antecedent basis for the limitations in the claims.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 8, 10-11, 18, 20, 23, and 26-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,867,400 (Ghoroury et al).

With respect to claims 8 and 31, Ghoroury discloses a programmable processor architecture for execution of a set of high-order instructions, the architecture comprising: an integrated circuit including a selected set of programmable application elements interconnected on a command/data/timing bus to cooperatively perform a specified application performing predefined functions **(corresponding to claimed first and second data value);** a clock logic block for providing the respective application element with timing signals and enabling the application logic block at the time its function is needed (***i.e., a clock is used to invoke the programming element irrespective of the time each programming element is stored***, **corresponding to regardless of whether a first data value is to be read from the store buffer prior to a second data value being read has been globally observed**); at least one of the application elements receives input data from the shared memory element being responsive to a high-order instruction associated with the corresponding application element and stored and grouped in a design library (**considered to becoming globally observable because of storage in memory**) [Col. 3, Lines 23-55; Col. 7, Lines 30-41]. The

features of the claims although not taught explicitly by Ghoroury, a main memory cache may be considered a "global observation store buffer" (GoSB) storing values only after RFO has been granted and thereby becoming globally observed (claim 9); itself inherently comprising a "non-committed store queue" (NcSQ) storing globally cached data not yet literally written (i.e. tagged as being dirty) to main memory and thereby "globally observed" (claim 10); with remaining claims being considered mere recitations of elements or behaviors considered otherwise inherent of typical cache implementation as may be obviously utilized to implement aforementioned GoSB and NcSQ caches/elements, and thereby considered obvious in combination with that more explicitly taught by Ghoroury.

With respect to claim 18, Ghoroury discloses in addition to the features of claim 8, as addressed above, an application logic block for performing predefined function; a clock logic block for providing the respective application element with timing signals and enabling the application logic block at the time its function is needed; and a time argument to determine the time the corresponding application element is invoked (**i.e. a logic to issue second instructions before a first instructions has become globally observable**) [Col. 3, Lines 23-55; Col. 7, Lines 30-41].

With respect to claim 27, Ghoroury discloses application syntax in the library including an interface block for interfacing the function block to the multi-purpose bus, set of application syntax can operate asynchronously, each application syntax on the multi-purpose bus can be invoked simultaneously for parallel processing or be staggered in time for pipeline processing or the application syntax being enabled only at

a time when its processing function is needed (**which is considered to have obtained exclusive ownership of the bus while processing**) [Col. 7, Lines 47-58].

With respect to claim 10-11, 20, 23, 26, 28-30, and 32-38, the features of the claims although not taught explicitly by Ghoroury, a main memory cache may be considered a "global observation store buffer" (GoSB) storing values only after RFO has been granted and thereby becoming globally observed (claim 9); itself inherently comprising a "non-committed store queue" (NcSQ) storing globally cached data not yet literally written (i.e. tagged as being dirty) to main memory and thereby "globally observed" (claim 10); with remaining claims being considered mere recitations of elements or behaviors considered otherwise inherent of typical cache implementation as may be obviously utilized to implement aforementioned GoSB and NcSQ caches/elements, and thereby considered obvious in combination with that more explicitly taught by Ghoroury. Ghoroury discloses an interface block for receiving commands and data from and send commands and data to other application elements via the command/data/timing bus and each instruction including a command argument to set control parameters of the corresponding application element; and integrated circuit including a selected set of programmable application elements interconnected on the command/data/timing bus to cooperatively perform a specified application [Col. 7, Lines 30-65; Col. 3, Lines 23-53].

***Allowable Subject Matter***

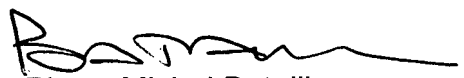
8. Claims 12-13 and 15-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Contact Information***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pierre-Michel Bataille whose telephone number is (571) 272-4178. The examiner can normally be reached on Mon, Tue-Fri (8:00A to 5:30P).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew M. Kim can be reached on (571) 272-4182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Pierre-Michel Bataille
Primary Examiner
Art Unit 2186